WHAT IS CLAIMED IS:

1. An inner rotor motor comprising:

a rotor having a plurality of magnetic poles circumferentially arranged; and

a stator having a stator core that includes a plurality of magnetic pole teeth opposing a circumference of the rotor, a coil being provided on each of the magnetic pole teeth,

wherein the stator extends not more than 180 degrees with respect to a central angle of the rotor.

2. The inner rotor motor according to Claim 1, wherein the stator extends not more than 90 degrees with respect to the central angle of the rotor.

3. The inner rotor motor according to Claim 1, further comprising a magnetic balancer to secure magnetic balance between the rotor and the stator opposing the circumference of the rotor.

4. The inner rotor motor according to Claim 3, further comprising a chassis to which the rotor is rotatably installed and which is formed of a magnetic material, the magnetic balancer integral with the chassis.

5. The inner rotor motor according to Claim 3, wherein the magnetic balancer comprises a plurality of segments

arranged in a circumferential direction of the rotor.

6. The inner rotor motor according to Claim 3, wherein a sum of the magnetic fluxes traversing the magnetic balancer from the rotor and a sum of the magnetic fluxes traversing the magnetic pole teeth of the stator from the rotor are equal.

7. The inner rotor motor according to Claim 3, wherein the magnetic balancer and the magnetic pole teeth are point-symmetrical with respect to a center of the rotor.

8. The inner rotor motor according to Claim 7, wherein the magnetic balancer and symmetrical magnetic pole teeth respectively occupy equal lengths on the circumference of the rotor.

9. The inner rotor motor according to Claim 1, wherein six magnetic pole teeth are provided.

10. A disk apparatus comprising the inner rotor motor according to Claim 1.

11. An inner rotor motor comprising:

a rotor having a plurality of magnetic poles circumferentially arranged;

a stator having a stator core that includes a plurality

of magnetic pole teeth positioned on an outer side of a circumference of the rotor and opposing the rotor, a coil being provided on each of the magnetic pole teeth,the stator extending around the rotor not more than 180 degrees with respect to a central angle of the rotor; and

a magnetic shield to block magnetic fluxes from the rotor.

12. The inner rotor motor according to Claim 11, wherein the magnetic shield is formed of a magnetic material and integral with a chassis on which the rotor is rotatably installed.

13. The inner rotor motor according to Claim 11, wherein a distance between the magnetic shield and the circumference of the rotor is larger at both ends of the magnetic shield than at a center of the magnetic shield.

14. The inner rotor motor according to Claim 13, wherein the magnetic shield linearly extends in a tangential direction of the circumference of the rotor.

15. The inner rotor motor according to Claim 11, wherein a length of the magnetic shield in a circumferential direction of the rotor is shorter than a circumferential length of two magnetic poles of the rotor.

16. The inner rotor motor according to Claim 11, further comprising a magnetic balancer to secure magnetic balance between the rotor and the magnetic shield provided on the outer side of the circumference of the rotor.

17. The inner rotor motor according to Claim 16, wherein the magnetic balancer and the magnetic shield are point-symmetrical with respect to a center of the rotor.

18. The inner rotor motor according to Claim 11, wherein the stator extends not more than 90 degrees with respect to the central angle of the rotor.

19. The inner rotor motor according to Claim 11, wherein six magnetic pole teeth are provided.

20. A disk apparatus comprising:

the inner rotor motor according to Claim 11; and

a magnetic head,

wherein the magnetic shield blocks magnetic fluxes from the rotor to the magnetic head.

21. An inner rotor motor comprising:

a rotor having a plurality of magnetic poles circumferentially arranged; and

a stator having a stator core that includes a plurality of magnetic pole teeth positioned on an outer side of a

circumference of the rotor and opposing the rotor, a coil being provided on each of the magnetic pole teeth, the stator extends not more than 180 degrees with respect to a central angle of the rotor;

a chassis to which the rotor is rotatably installed and which is formed of a magnetic material; and

an interaction setting device to set a force acting between the rotor and the chassis, the interaction setting device being disposed at under a rotational position of the magnetic poles of the rotor.

22. The inner rotor motor according to Claim 21, wherein the interaction setting device is a notch provided in the chassis.

23. The inner rotor motor according to Claim 21, wherein the interaction setting device is a plurality of notches provided in the chassis, the notches being point-symmetrical with respect to a center of the rotor.

24. The inner rotor motor according to Claim 23, further comprising:

a magnetic balancer to secure magnetic balance between the rotor and the stator provided on the outer side of the circumference of the rotor, wherein

the notches are in contact with the magnetic balancer.

25. The inner rotor motor according to Claim 24, wherein the magnetic balancer is integral with the chassis.

26. The inner rotor motor according to Claim 23, further comprising:

a magnetic shield to block magnetic fluxes from the rotor provided on the outer side of the circumference of the rotor, wherein

the notches are in contact with the magnetic shield.

27. The inner rotor motor according to Claim 26, wherein the magnetic shield is integral with the chassis.

28. The inner rotor motor according to Claim 23, further comprising:

a magnetic balancer to secure magnetic balance between the rotor and the magnetic shield provided on the outer side of the circumference of the rotor, wherein

the notches are in contact with the magnetic balancer.

29. The inner rotor motor according to Claim 28, wherein the magnetic balancer is integral with the chassis.

30. The inner rotor motor according to Claim 23, wherein:

the notches continue to an outer side of a rotational position of the rotor, and

the notches partly accommodate the coils in the stator.

31. The inner rotor motor according to Claim 22, wherein the stator extends not more than 90 degrees with respect to the central angle of the rotor.

32. The inner rotor motor according to Claim 23, wherein the stator extends not more than 90 degrees with respect to the central angle of the rotor.

33. The inner rotor motor according to Claim 22, wherein six magnetic pole teeth are provided.

34. The inner rotor motor according to Claim 23, wherein six magnetic pole teeth are provided.

35. A disk apparatus comprising the inner rotor motor according to Claim 21.

36. An inner rotor motor comprising:

a rotor having a plurality of magnetic poles circumferentially arranged; and

a stator having a stator core that includes a plurality of magnetic pole teeth opposing a circumference of the rotor, a coil being provided on each of the magnetic pole teeth,

wherein the stator extends not more than 90 degrees with respect to a central angle of the rotor.

37. The inner rotor motor according to Claim 36, the magnetic pole teeth being accommodated in a notch that extends from a core of the stator to below the rotor.

38. The inner rotor motor according to Claim 36, the magnetic pole teeth being symmetric around a center of the stator and magnetic pole teeth on one side of the center of the stator having different lengths.

39. The inner rotor motor according to Claim 38, the coils having lengths corresponding to the lengths of the corresponding magnetic pole teeth.

40. The inner rotor motor according to Claim 39, the coils each having a number of turns corresponding to the length of the coil.

41. The inner rotor motor according to Claim 40, the stator configured to receive a plurality of operating phases, the number of turns of the coils corresponding to each phase being equal.

42. The inner rotor motor according to Claim 38, a density of the magnetic pole teeth being greater than a density of the magnetic poles in an angle defined by the stator.

43. The inner rotor motor according to Claim 42, the magnetic poles having a circumferential length not less than twice a circumferential length of end portions of the magnetic pole teeth opposing the magnetic poles.

44. The inner rotor motor according to Claim 36, further comprising a magnetic balancer opposing the circumference of the rotor to secure magnetic balance between the rotor and the stator.

45. The inner rotor motor according to Claim 44, further comprising a chassis to which the rotor is rotatably installed and which is formed of a magnetic material, the magnetic balancer integral with the chassis.

46. The inner rotor motor according to Claim 44 the magnetic balancer comprising a plurality of segments arranged in a circumferential direction of the rotor, the magnetic balancer being point-symmetrical with the magnetic pole teeth with respect to a center of the rotor.

47. The inner rotor motor according to Claim 46, wherein a sum of the magnetic fluxes traversing the magnetic balancer from the rotor and a sum of the magnetic fluxes traversing the magnetic pole teeth of the stator from the rotor are equal.

48. The inner rotor motor according to Claim 47, each magnetic balancer segment being symmetrical with and having an equal circumferential length as that of one of the magnetic pole teeth.

49. The inner rotor motor according to Claim 48, a radius of the magnetic balancer segments from the center of the rotor larger than a radius of end portions of the magnetic pole teeth from the center of the rotor.

50. The inner rotor motor according to Claim 49, the magnetic balancer segments having substantially equal heights and more proximate to the chassis than an upper surface of the magnetic poles.

51. The inner rotor motor according to Claim 50, the end portions of the magnetic pole teeth more proximate to the chassis than an upper surface of the magnetic poles.

52. The inner rotor motor according to Claim 45, further comprising a second notch accommodating the magnetic balancer, the first and second notches being symmetric around a center of the rotor.

52. The inner rotor motor according to Claim 36, further comprising a magnetic head and a magnetic shield to

block magnetic flux of the magnetic poles from the magnetic head.

53. The inner rotor motor according to Claim 52, the magnetic shield having a height no smaller than a height of the magnetic poles.

54. The inner rotor motor according to Claim 53, further comprising a chassis to which the rotor is rotatably installed and which is formed of a magnetic material, the magnetic shield integral with the chassis and having a height no smaller than a height of the magnetic poles.

55. The inner rotor motor according to Claim 53, the magnetic shield being substantially tangential to the circumference of the rotor.

56. The inner rotor motor according to Claim 53, the magnetic shield being approximately flush with an upper surface of the magnetic poles and increasing in distance from the magnetic poles with increasing proximity to an end of the magnetic shield.

57. The inner rotor motor according to Claim 53, further comprising a magnetic balancer opposing the circumference of the rotor to secure magnetic balance between the rotor and the magnetic shield.

58. The inner rotor motor according to Claim 36, further comprising a plurality of magnetic balancers opposing the circumference of the rotor to secure magnetic balance between the rotor and the stator.

59. The inner rotor motor according to Claim 58, the magnetic balancers and the stator all being symmetric with each other relative to a center of the rotor.

60. The inner rotor motor according to Claim 59, further comprising a chassis to which the rotor is rotatably installed and which is formed of a magnetic material, the magnetic balancers integral with the chassis.

61. The inner rotor motor according to Claim 59, the magnetic balancers each comprising a plurality of segments arranged in a circumferential direction of the rotor.

62. The inner rotor motor according to Claim 61, a circumferential length of the magnetic balancers being equal.

63. The inner rotor motor according to Claim 62, a circumferential length of one of the plurality of segments in each magnetic balancer being equal to a circumferential length of two of the magnetic poles.

64. The inner rotor motor according to Claim 63, further comprising a magnetic head, a first of the one of the plurality of segments being a magnetic shield to block magnetic flux of the magnetic poles from the magnetic head.

65. The inner rotor motor according to Claim 64, a second of the one of the plurality of segments, the first of the one of the plurality of segments and the stator all being symmetric with each other relative to a center of the rotor.

66. The inner rotor motor according to Claim 58, further comprising notches accommodating the magnetic balancers and the stator, the notches being symmetric around a center of the rotor.